

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/050814

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H01L23/528 H01L23/522

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PATENT ABSTRACTS OF JAPAN vol. 008, no. 135 (E-252), 22 June 1984 (1984-06-22) -& JP 59 046044 A (NIPPON DENKI KK), 15 March 1984 (1984-03-15) abstract	1-9
Y	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 03, 28 April 1995 (1995-04-28) -& JP 06 334157 A (SONY CORP), 2 December 1994 (1994-12-02) abstract	1-9 -/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the International filing date but later than the priority date claimed

- \*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- \*&\* document member of the same patent family

Date of the actual completion of the International search

16 August 2004

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23/08/2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PATENT ABSTRACTS OF JAPAN vol. 017, no. 035 (E-1310), 22 January 1993 (1993-01-22) -& JP 04 255246 A (TOSHIBA CORP), 10 September 1992 (1992-09-10) abstract -----	1
A	EP 1 231 638 A (TOSHIBA ELECTRONICS EUROP GMBH) 14 August 2002 (2002-08-14) figure 1 -----	1,4
A	US 6 346 721 B1 (SCHULTZ RICHARD T) 12 February 2002 (2002-02-12) column 3, line 54 - column 4, line 51; figure 3 -----	1,4

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Information on patent family members

International Application No  
PCT/IB2004/050814

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
JP 59046044	A 15-03-1984	NONE		
JP 06334157	A 02-12-1994	NONE		
JP 04255246	A 10-09-1992	JP 4255246 T1		10-09-1992
EP 1231638	A 14-08-2002	EP 1231638 A1		14-08-2002
US 6346721	B1 12-02-2002	NONE		